BEFORE THE PUBLIC UTILITIES COMMISSION

OF THE STATE OF HAWAII

In the Matter of the Petition of APOLLO ENERGY CORPORATION Pursuant to Section 6-74-15, Hawaii Administrative Rules.	)	DOCKET NO. 00-0135

DECISION AND ORDER NO. 21227

Filed August 9, 2004

At 2 o'clock P .M.

Karen Higashi

Chief Clerk of the Commission

ATTEST: A True Copy
KAREN HIGASHI
Chief Clerk, Public Utilities
Commission, State of Hawaii.

K. Higashi

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DECISION AND ORDER

I.

Background

The recent activity generated in this docket arises out of APOLLO ENERGY CORPORATION's ("Apollo") motion for expedited ruling. Since then, the commission has issued numerous orders and held two (2) conferences with counsel for HAWAII ELECTRIC LIGHT COMPANY INC. ("HELCO") and Apollo (collectively, the "Parties", individually, the "Party").[1]

The Parties: (1) on May 26, 2004, submitted their respective final draft power purchase agreements; (2) on June 9, 2004, stipulated to the evidentiary record;[2] and (3) on June 25, 2004, filed their respective briefs, in compliance with Order

[1] See Order No. 20892, filed on April 8, 2004; Order No. 20900, filed on April 16, 2004; Order No. 20919, filed on April 22, 2004; Order No. 20946, filed on April 30, 2004; Order No. 20995, filed on May 21, 2004; Order No. 21020, filed on June 2, 2004; Order No. 21054, filed on June 14, 2004; and Order No. 21122, filed on July 16, 2004. Chairman Carlito P. Caliboso presided over two (2) conferences with the Parties' counsel, held on April 28 and May 19, 2004, respectively.

[2] See the Parties' Agreement, filed on June 9, 2004; and Order No. 21054.

No. 21054. In addition, on June 28, 2004, Apollo filed an addendum to its brief.

The commission, in this Order, addresses the applicable issues identified in Order No. 21020, pursuant to Hawaii Administrative Rules ("HAR") § 6-74-15(e).

II.

Apollo's Wind Farm

Apollo operates the Kamaoa wind farm located at South Point on the island of Hawaii. Apollo's wind farm: (1) presently utilizes Mitsubishi wind turbine generators; and (2) is designated a qualifying facility by the Federal Energy Regulatory Commission. The wind farm's current capacity is 7 megawatts ("MW").

Apollo currently sells its as-available energy to HELCO, under the terms of a power purchase agreement ("PPA").[3] The PPA, which was scheduled to expire on or about June 29, 2002, continues in effect by the Parties' mutual agreement, subject to termination by either Party under the PPA's notice of termination provision. A one (1)-breaker switching station presently interconnects Apollo's wind farm to HELCO's system.

Apollo states that "[t]he Mitsubishi wind turbines at the facility desperately need to be replaced, and the wind farm is overdue for repowering and expansion."[4] In general: (1) the repowering involves replacing the existing wind turbine

[3] See Decision and Order No. 18568, filed on May 30, 2001, at 2, footnote 3.

[4] Apollo's brief, at 11.

generators with state-of-the-art generators; and (2) Apollo proposes to expand its wind farm to 20 MW. Accordingly, Apollo is negotiating a new or restated PPA (known as the Restated and Amended Contract, or "RAC") with HELCO.

Initially, Apollo planned to repower and expand its wind farm using Lagerway wind turbine generators, model 30/250 and possibly model 50/750. It later switched to Vestas V80 1.8 MW wind turbine generators. Presently, Apollo proposes to use approximately fourteen (14) GE Wind Energy ("GEWE") 1.5 MW wind turbine generators.

III.

The Interconnection Requirements Studies

The stipulated evidentiary record includes:

1. The Interconnection Requirements Study ("IRS"), dated October 2003, prepared by the Hawaiian Electric Company, Inc. ("HECO"), Transmission Planning Division (the "October 2003 Preliminary IRS" or "Preliminary IRS"). This Preliminary IRS is based on the interconnection requirements for Apollo's GEWE 1.5 MW wind turbine generators.

2. The revised draft IRS, dated November 2002, prepared by HECO's Transmission Planning Division (the "November 2002 Draft IRS" or "Draft IRS"). This Draft IRS is based on the interconnection requirements for Apollo's Lagerway model 50/750 wind turbine generators.[5]

[5]Both studies are collectively referred to as the "HECO Studies" or "Studies."

IV.

Issues

The underlying dispute involves the construction of a three (3) 69 kilovolt ("kV") circuit breaker switching station ("3-breaker system") *versus* a one (1) 69 kV circuit breaker switching station ("one-breaker system"). HELCO's cost estimates are: (1) $2.194 million for a 3-breaker system; (2) $2.175 million for a 2-breaker system; and (3) $1.412 million for a one-breaker system. Apollo's estimated cost of a 3-breaker system is $2.9 million.

The specific issues, as identified in Order No. 21020, are:

1. Whether a 3-breaker system or a one-breaker system is necessary to permit interconnected operations of Apollo's repowered and expanded wind farm facility with HELCO's system? Also, who should construct and own the switching station?

2. Under either scenario, to what extent is each Party responsible for the costs of the: (A) switching station; (B) control building; and (C) operations and maintenance (aka O&M) of the switching station?

3. If the commission determines that only a one-breaker system is necessary and HELCO proposes to install a 3-breaker system, what will HELCO's share of the cost of the switching station be, if constructed by Apollo, and what will Apollo's share be, if constructed by HELCO?

4. Whether a load tap changer is necessary to permit interconnected operations of Apollo's repowered and expanded wind

farm facility with HELCO's system? If so, who is responsible for such costs?

V.

Issue No. 1

Whether a 3-breaker system or
a one-breaker system is necessary
to permit interconnected operations of
Apollo's repowered and expanded wind
farm facility with HELCO's system?

Also, who should construct
and own the switching station?

A.

Parties' Position

The undisputed evidence, HELCO asserts, shows that:

1. The sixty-four (64) mile-long 69 kV transmission line that runs from the Kilauea to Kealia switching stations (the "Kilauea-Kealia 69 kV line" or "69 kV line") is subject to an average of six (6) outages per year.

2. At certain HELCO load levels, when Apollo is exporting energy to HELCO in excess of certain levels and the output from Apollo's wind farm is instantaneously disconnected due to a trip of the 69 kV line, underfrequency load shedding of HELCO's customers will occur.

3. Under this scenario, approximately 3,000 to 7,000 HELCO customers could lose electricity.

4. When Apollo's wind farm is interconnected with a 3-breaker system, if the 69 kV line trips, Apollo's wind farm

will continue to export power to HELCO's system, and there will be no underfrequency load shedding of HELCO's customers.

5. When Apollo's wind farm is interconnected with a one-breaker system, if the 69 kV line trips, Apollo's wind farm output will be instantaneously disconnected from HELCO's system, which could result in the underfrequency load shedding of HELCO's customers.

From HELCO's perspective, therefore, a 3-breaker system is: (1) necessary to permit the interconnection of Apollo's wind farm with HELCO's system; and (2) required for the reliable operation of HELCO's system. A 3-breaker system, HELCO states, addresses its primary concern with the one-breaker system -- no instantaneous disconnection of Apollo's wind farm output when the 69 kV line trips, thus avoiding underfrequency load shedding of HELCO's customers.

In addition, a 3-breaker system design will:

1. Allow the 69 kV line to remain in service if a fault occurs on the Apollo tie line or tie transformer.

2. Segment the 69 kV line into a Kilauea new 3-breaker system and a Kealia new 3-breaker system segment, thus reducing "the length of transmission line the relays need to protect and monitor and make it so that the relays only react to disturbances up to the new three-breaker switching station."[6]

3. Allow a seamless segmentation of the 69 kV line such that Apollo can continue to export energy to HELCO via the segment of the 69 kV line that does not have the fault condition.

[6]HELCO's brief, at 17 - 18.

A one-breaker system, HELCO concludes, is not adequate to interconnect Apollo's wind farm to HELCO's system because:

1. The instantaneous disconnection of Apollo's wind farm output will occur when the Kilauea-Kealia 69 kV line trips, which could result in underfrequency load shedding of HELCO's customers;

2. The Kilauea-Kealia 69 kV line could trip unnecessarily for faults on the Apollo tie line; and

3. Due to Apollo's proposed use of a larger and lower impedance tie transformer, the 69 kV line could trip unnecessarily for faults on the Apollo distribution system.

Apollo states that: (1) the 3-breaker system represents HELCO's proposal to divide the Kilauea-Kealia 69 kV line into two (2) separate segments at Apollo's wind farm site; and (2) HELCO's 3-breaker system requires Apollo to design, engineer, and construct this system at Apollo's estimated cost of $2.9 million.

Apollo contends that: (1) a one-breaker system is all that is necessary to permit the interconnected operations of its wind farm with HELCO's system; (2) HELCO's 3-breaker system is unnecessary; and (3) HELCO's 3-breaker system requirement: (A) is inconsistent with federal and State laws governing the sale and purchase of energy between a qualifying facility and electric utility; and (B) results in unreasonable interconnection costs.

HELCO's Studies, Apollo asserts, fail to substantiate the interconnection requirements for a 3-breaker system. Rather, the 3-breaker system set forth in both Studies "is apparently

based on substantially identical reasoning and unjustified HELCO assumptions that there should be no spinning reserve on the system. Absent this assumption, HELCO [will] suffer no underfrequency load shedding and no 3-breaker system [is] 'required.' HELCO's conclusions and assumptions are not affected by the choice of [wind turbine generators]."[7]

Apollo specifically asserts:

1. HELCO's contention that a 3-breaker system is necessary because the 69 kV line has experienced an average of six (6) system faults per year is a system betterment/emergency condition issue. Apollo is not responsible for the outages on the 69 kV line caused by HELCO system faults, and its repowered and expanded wind farm should not cause a fault to occur on the 69 kV line.

2. Load shedding due to faults on the 69 kV line has nothing to do with interconnection requirements. Instead, HELCO's predicament results from its lack of an adequate spinning reserve policy, unacceptably high rates of failure of its 69 kV line, its failure to properly plan for additional generation, and misguided attempts to foist system emergencies and system disturbances on Apollo.

3. HELCO offers no legitimate technical reason as to why Apollo's tie line or tie transformer should cause faults on HELCO's transmission line. Instead, HELCO's Studies conclude that the likelihood of a failure of Apollo's tie line and tie transformer is low and acceptable. Thus, no remedy is needed.

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[7]Apollo's brief, at 12 (footnote and text therein omitted).

4. Apollo's relay protection systems will correct any false tripping of HELCO's 69 kV line due to a rare fault, if any, on Apollo's tie line and transformer. Conversely, HELCO's 3-breaker system will "do nothing to address even rare Apollo faults, if any."[8]

In particular, Apollo's consultants, after examining the relays and their effective timing, conclude:

> With proper coordination and adjustment of the existing relay settings, Apollo's relay should detect a fault on the wind farm's tie line and cause Apollo's breaker to open first. Thus, the Kilauea-Kealia transmission line would be completely unaffected and would not trip.[9]

5. Apollo's consultants further conclude that, with the proper relay design and coordination, Apollo's use of a larger and low-impedence tie transformer should not aggravate the problem and cause the 69 kV line to trip for internal wind faults.

6. It is in the relaying that the protection of HELCO's lines will be implemented, independent of the number of breakers at the switching station. The number of breakers has nothing to do with the prevention of faults. Thus, Apollo's proposed enhanced relay protection schemes, together with a one-breaker system, is sufficient to prevent a fault on the Apollo tie line from tripping the 69 kV line.

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[8] Id. at 5.

[9] Id. at 25 - 26 (citing to Apollo's consultant's affidavit).

In addition to the enhanced relay protection schemes, Apollo proposed other alternatives to address HELCO's concern over the false tripping of HELCO's 69 kV line: (1) assisting HELCO in obtaining a reasonable level of spinning reserve; (2) installing a large battery energy storage system (aka BESS); and (3) a shared arrangement, with Apollo paying for one-breaker and HELCO paying for 2-breakers.

HELCO states that the draft RAC allows Apollo, its contractors, or both, to construct the 3-breaker system based on HELCO's equipment and construction specifications and standards. Alternatively, HELCO, its contractors, or both, will construct the 3-breaker system. Apollo is required to cooperate with and assist HELCO in obtaining a lease for the land on which the 3-breaker system is constructed, and Apollo is required to pay HELCO for the cost of the lease rent for the land.

HELCO stresses that, for operational and safety reasons, HELCO must own the 3-breaker switching station. Conversely, if the commission finds that only a one-breaker system is necessary, then Apollo should construct and own the one-breaker switching station.

Apollo notes that under the current PPA, it owns, operates, and maintains the interconnection facilities. Apollo contends that, under the RAC, it should construct and own the one-breaker system. If the commission finds that a 3-breaker system is necessary, Apollo's preference is that it would own a one-breaker system and that HELCO would own a 2-breaker system.

B.

3-Breaker System and Control Building

HELCO, as the franchised provider of electric utility service on the island of Hawaii: (1) is responsible for ensuring the overall reliability and integrity of its generation, transmission, and distribution system; and (2) is obligated to provide reliable electric utility service to its ratepayers at just and reasonable rates. Concomitantly, State law encourages the development of renewable energy resources.[10]

The underlying basis in support of HELCO's 3-breaker system is the HECO Studies, in particular, the Preliminary IRS. Conversely, Apollo's contention that a 3-breaker system is not necessary to interconnect its wind farm with HELCO's system is primarily based on its consultants' analyses of the HECO Studies, including the consultant's affidavit attached to Apollo's motion for expedited ruling. Upon thorough review, the commission credits the HECO Studies.

The Preliminary IRS identifies three (3) primary areas of concern in the event a 3-breaker system is not used to interconnect Apollo's expanded wind farm: (1) underfrequency load shedding of HELCO's customers; (2) unnecessary tripping for faults on the Apollo tie line; and (3) unnecessary tripping for faults on the Apollo distribution system.

[10]See, e.g., Act 95, 2004 Session Laws of Hawaii (June 2, 2004); and HRS § 226-18.

The commission, in general, finds technically feasible HELCO's proposed 3-breaker system. The 3-breaker system is designed to: (1) prevent the instantaneous disconnection of Apollo's wind farm output when the 69 kV line trips; (2) allow the 69 kV line to remain in service if a fault occurs on the Apollo tie line or tie transformer; and (3) segment the 69 kV line such that Apollo can continue to export energy to HELCO via the segment of the 69 kV line that does not have the fault condition. Moreover, the inclusion of a control building is consistent with HELCO's current design practice for its switching stations.

The commission also finds it reasonable for HELCO to construct, own, and operate the 3-breaker switching station and control building. The 3-breaker system, in essence, will become a new segment of the Kilauea-Kealia 69 kV line. In addition, HELCO's construction of the switching station and control building should curtail any issues or concerns between the Parties regarding cost overruns or unnecessary expenditures, or claims that Apollo failed to meet HELCO's specified design criteria.

That said, the commission believes that the Parties should allow qualified Apollo personnel reasonable access to the switching station, as necessary, to operate Apollo's wind farm and perform its contractual obligations of providing as-available energy to HELCO. If HELCO believes that its personnel should be present whenever Apollo's personnel access the switching station, each Party should be responsible for its own associated costs.

VI.

Issue No. 2

Under either scenario, to what extent is each Party responsible for the costs of the (A) switching station; (B) control building; and (C) O&M of the switching station?

A.

Parties' Position

HELCO contends that Apollo, as a qualifying facility under the commission's avoided cost rules, is required to pay for all interconnection costs. HAR §§ 6-74-1 and 6-74-26. Moreover: (1) capital interconnection costs include the costs of a switching station and control building; and (2) maintenance costs include the O&M costs of the interconnection facilities. Under either the 3-breaker or one-breaker scenario, HELCO asserts that Apollo is responsible for the costs of the switching station, control building, and operations and maintenance of the interconnection facilities, including the switching station.

In support of its underlying position, HELCO states that:

1. A 3-breaker system is necessary to permit interconnected operations of Apollo's wind farm with HELCO's system.

2. HELCO will not construct a 3-breaker, 2-breaker, or one-breaker system in Kamaoa, in the absence of Apollo's wind farm. Thus: (A) HELCO will not incur any O&M costs for such a non-existent facility; and (B) such costs are Apollo's responsibility.

3. The 3-breaker system is not intended to upgrade HELCO' system.

4. The 3-breaker system is required to avoid unnecessary customer load shedding and other grid problems following the repowering and expansion of Apollo's wind farm.

5. The control building is a necessary component of the switching station under HELCO's current design practices. The control building: (A) serves an important function to protect relaying and communications equipment from the environmental elements; and (B) provides security. Relaying and communications is vital for interconnecting Apollo's wind farm with HELCO's system.

Apollo asserts that under either the one-breaker or 3-breaker scenario: (1) it is responsible for the reasonable costs of a one-breaker system and related O&M costs; and (2) a control building is not necessary, and no such costs should be assessed against Apollo. Its cost responsibility "should not exceed the reasonable costs incurred and directly related to the installation and maintenance of the physical facilities necessary to permit interconnected operations with the qualifying facility."[11]

In any event, "[w]here there is a one-breaker system owned and constructed by Apollo, as Apollo believes the case should be, the performance and operation and maintenance responsibilities and the costs, should continue to belong to

[11]Apollo's brief, at 8. See also id. at 36 - 37.

Apollo, as it is currently, similar to the successful [PPA] that has governed the wind farm for many years."[12]

B.

Cost Allocation

HELCO's cost estimates for a one-breaker and 3-breaker systems are $1.412 million and $2.194 million, respectively. Both estimates also include the cost of a control building.[13] Apollo's estimated cost of a 3-breaker system is $2.9 million.

HELCO's cost estimates are supported by the written declaration and cost data of its planning engineer. Apollo's cost estimate is not supported by the stipulated evidentiary record. The commission credits HELCO's respective cost estimates.

HELCO's primary concern with the one-breaker system and underlying justification for a 3-breaker system is related to a problem that originates on HELCO's network and is beyond Apollo's control. Specifically, the 3-breaker system is designed to address HELCO's primary concern with respect to the one-breaker system -- preventing the instantaneous disconnection of Apollo's wind farm output when the 69 kV line trips, thereby avoiding the underfrequency load shedding of HELCO's customers. Moreover, HELCO's underlying justification is predicated on its system's need for reliable, available generation from Apollo, yet Apollo

[12]Apollo's brief, at 9.

[13]HELCO's cost estimates for a control building are: (1) $74,000 for a one-breaker system; and (2) $148,000 for a 3-breaker system.

is compensated for energy provided to HELCO on an as-available basis.[14]

While a 3-breaker system is technically feasible (see Section V(B), above), it appears that the betterment of HELCO's system will result from this design. Concomitantly, the 3-breaker system is also designed to: (1) enable the Kilauea-Kealia 69 kV line to remain in service if a fault occurs on the Apollo tie line or tie transformer; and (2) segment the 69 kV line such that Apollo can continue to export energy to HELCO via the segment of the 69 kV line that does not have the fault condition. Accordingly, the commission believes that an allocation of the costs associated with the construction of a 3-breaker system and control building is appropriate.

Given the problems the 3-breaker system is designed to prevent and the benefits realized by both HELCO and Apollo, the commission believes that an apportionment of the costs between Apollo and HELCO is reasonable, as follows: (1) Apollo is responsible for $1.412 million in costs; and (2) HELCO is responsible for the remaining costs over and above $1.412 million. This provides for an approximate two (2) to one (1) allocation of costs between the Parties. Nonetheless, the Parties, during its resumption of negotiations, are free to discuss and agree on a different apportionment.

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[14]By no means is this statement or decision and order intended to reopen the commission's Decision and Order No. 18568, filed on May 30, 2001, which held that: (1) Apollo is not under a continual obligation to supply power to HELCO upon demand; (2) the wind resource used by Apollo to generate energy is as-available; and (3) capacity payments for Apollo are not warranted.

With respect to O&M expenses, HELCO's most recent estimated annual cost to operate and maintain a 3-breaker system is $5,380, excluding the need for any "extraordinary" repairs or maintenance. Apollo suggests that its responsibility for O&M costs should be proportionate to the commission's determination of Apollo's allocated share of the necessary physical facilities to permit the interconnection of its wind farm with HELCO's system.

The commission finds that a 2-to-1 allocation of the O&M costs is also reasonable, with: (1) Apollo initially incurring approximately $3,600 in annual O&M charges from HELCO; and (2) HELCO paying for the remaining O&M costs. And while Apollo's initial obligation is capped at an annual $3,600, given the RAC's proposed duration, the Parties are encouraged to explore the feasibility of including reasonable annual adjustments to reflect inflation and other changes, including increases in HELCO's hourly labor rates.

VII.

Issue No. 3

If the commission determines that only a one-breaker system is necessary and HELCO proposes to install a 3-breaker system, what will HELCO's share of the cost of the switching station be, if constructed by Apollo, and what will Apollo's share be, if constructed by HELCO?

The commission's rulings in Sections V and VI, above, render moot Issue No. 3.

VIII.

Issue No. 4

Whether a load tap changer is necessary to permit interconnected operations of Apollo's repowered and expanded wind farm facility with HELCO's system? If so, who is responsible for such costs?

A.

Parties' Position

A load tap changer ("LTC"), HELCO explains, "is a device that will allow Apollo's wind farm to meet the undervoltage ride through requirements specified in HELCO's draft RAC."[15] HELCO's proposed undervoltage ride through requirements are specified in Appendix B, Section 2(j)(2), page B-11, of its final draft RAC. HELCO estimates that "the incremental cost of purchasing a transformer equipped with an LTC should be on the order of $70,000 to $80,000."[16]

HELCO states that the undervoltage ride through requirements are necessary for Apollo's wind farm in order to: (1) prevent unnecessary customer outages; and (2) preserve the stability of the grid. In particular:

1. Due to the relatively large size of Apollo's wind farm, the tripping of Apollo's wind farm could lead to underfrequency load shedding of HELCO's customers.

2. Without the specified undervoltage ride through capability, during some system disturbances, all of Apollo's wind

[15]HELCO's brief, at 43.

[16]Id. at 45.

turbine generators could trip before HELCO's own relay protection has the opportunity to clear the fault and restore voltage.

3. Apollo's wind turbine generators, standing alone, will not meet the undervoltage ride through requirements specified in HELCO's final draft RAC. Apollo's third-party vendor has concluded that Apollo's generators are capable of meeting the undervoltage ride through requirements if a LTC is installed. HELCO concurred with Apollo's third-party vendor's conclusion.

HELCO also asserts that the Parties previously agreed on the undervoltage ride through requirements, which were included in the draft RAC. Later, Apollo proposed that the requirements be modified to enable Apollo's wind turbine generators to meet the modified requirements without the use of a LTC. Specifically, Apollo proposes that the undervoltage ride through requirements be modified to require that its wind turbine generators remain connected to HELCO's system for twenty (20) minutes when there is an undervoltage disturbance such that voltage is greater than or equal to ".80 pu" and less than ".90 pu." See Appendix B, Section 2(j)(2), page B-9, of Apollo's final draft RAC.

HELCO contends that no basis exists for Apollo's proposed modification of the undervoltage ride through requirements. Apollo previously accepted these requirements without change, which were identified in both the November 2002 Revised Draft IRS and October 2003 Preliminary IRS.

In essence, the undervoltage ride through requirements "can be met by Apollo's wind farm through the use of what should be a relatively inexpensive LTC."[17]

Apollo maintains that a LTC is not necessary, and that HELCO is responsible for all associated LTC costs. Apollo contends that: (1) HELCO's undervoltage ride through requirements are met by GEWE's 1.5 wind turbine generator specifications, given the generator's twenty (20)-minute capability for the 0.80 pu to 0.90 pu range; and (2) the requirements should be conformed to the twenty (20) minutes needed for the start-up of HELCO's back-up generation in the 0.80 pu to 0.90 pu range.

B.

Undervoltage Ride Through Requirements/Load Tap Changer

In general, Apollo's proposed standards differ from HELCO's undervoltage ride through requirements in that Apollo's do not address more significant voltage drops that occur over short periods of time, i.e., two (2) seconds and less.

HELCO, as the franchised utility provider of electric service on the island of Hawaii, is ultimately responsible for ensuring the overall reliability of its network. The stipulated evidentiary record reveals that: (1) Apollo previously agreed to the undervoltage ride through requirements without change; and (2) Apollo's third-party vendor concluded that Apollo's wind turbine generators are capable of meeting said requirements if a LTC is installed. In addition, the same requirements are set

[17] Id. at 9 and 45.

forth in the power purchase contract between HELCO and Hawi Renewable Development, LLC, an independent power producer scheduled to own and operate a 10.56 MW wind farm in Hawi, island of Hawaii.[18]

The commission finds reasonable HELCO's proposed undervoltage ride through requirements. Hence, if a LTC is required by Apollo to meet HELCO's specifications, the cost associated with a LTC should be borne by Apollo.

IX.

Commission's Observations

The commission concludes by making the following observations to expedite and assist the Parties' negotiations:

1. State law encourages the development of renewable energy and establishes renewable energy targets for electric utilities.[19] The commission expresses optimism that through cooperation and arms-length negotiations the Parties can reach a final agreement on a RAC without further undue delay.

2. Through the various status conferences held in this matter and the draft agreements presented by the Parties to the commission during those proceedings, it is clear that the Parties should be able to promptly complete their agreement with the guidance and decisions made by the commission in this Order. Accordingly, the commission expects the Parties to provide the

[18]The commission recently approved this power purchase contract between HELCO and Hawi Renewable Development, LLC. See Decision and Order No. 20979, filed on May 14, 2004, in Docket No. 04-0016.

[19]See footnote 10, above.

commission with the final executed RAC based on this Order for approval by the commission within sixty (60) days of this Order. If the Parties cannot agree on a final RAC within such time, the Parties shall provide the commission with their respective proposed versions of the RAC by the same date, and the commission will determine which version best implements this Order and the Parties' prior agreed-upon terms of the RAC.

X.

Orders

THE COMMISSION ORDERS that within sixty (60) calendar days from the date of this Order, unless ordered otherwise, the Parties shall submit their final executed RAC for commission review and approval. If the Parties are unable to agree on a final RAC within such time, the Parties shall submit their respective proposed versions of the RAC by the same date.

DONE at Honolulu, Hawaii AUG 09 2004.

PUBLIC UTILITIES COMMISSION
OF THE STATE OF HAWAII

By _____
Carlito P. Caliboso, Chairman

By _____
Wayne H. Kimura, Commissioner

APPROVED AS TO FORM:

By _____
Janet E. Kawelo, Commissioner

_____
Michael Azama
Commission Counsel

00-0135do2.sl

CERTIFICATE OF SERVICE

I hereby certify that I have this date served a copy of the foregoing Decision and Order No. 21227 upon the following parties, by causing a copy hereof to be mailed, postage prepaid, and properly addressed to each such party.

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DATED: AUG 09 2004